MISSOURI ENGINEERING JOB APPROVAL AUTHORITY

NAME _____ TITLE _____ GRADE _____ LOCATION _____

DELEGATED BY _____ TITLE _____ DATE _____
(Responsible Engineer)

CONCURRED BY _____ TITLE _____ DATE _____
(Line Supervisor)

NOTES

1. Approval is issued based on the individual's training, experience, and demonstrated competence. Increased authorities (based on local needs and individual interest) are encouraged for all individuals.

2. Employees shall not approve designs or certify construction for practices that exceed their maximum approval limit. However, employees (working under the direction of person approving) can complete work on practices above their limit and submit for approval.

3. The Responsible Engineer may recommend approval authority only up to his/her approval authority.

4. The controlling factor that results in the highest classification determines the Job Class. For example, a water and sediment control basin with a fill height of 7 feet (CLASS III) and an underground outlet -- 5 inch diameter (Class I); therefore it is Job Class III.

5. Engineering practices not included in this chart or more complex practices shall be sent with documentation to the State Conservation Engineer for approval.

6. Engineering approval applies to repair or rehabilitation, as well as new construction. Refer to NEM 501.20-.24 (Subpart A) for repair and rehabilitation or NEM 501.00 -.09 (Subpart A) for new construction, as appropriate.

7. The approving engineer shall have the appropriate approval limit for practices requiring signing and sealing of construction plans by a licensed professional engineer.

8. DEFINITION OF MAXIMUM APPROVAL LIMIT COLUMNS

Inventory and Evaluation (I&E) - On-site observations of an exploratory nature and preparation of sound alternative solutions of sufficient intensity for the cooperator to make treatment decisions. This may require assistance from higher levels for large or more complex jobs. (See NEM 501 and 510)

Design - Designing and checking all aspects of the supporting data, drawings, and specifications to ensure that the planned practice will meet the purpose for which it is installed. This also includes setting any specific inspection requirements. Approval signature is required. (See NEM 501 and 511)

Construction (Const.) - Surveys, layout, staking, inspection of materials and work, and making tests to determine that the job meets specifications. Jobs where letters of appointment for inspection are issued are not included on this chart. Approval signature to certify construction is required. (See NEM 501 and 512)

REVIEW   The form will be reviewed with the employee and revised as needed. See NEM 501.04(b)(5)
                If no significant changes are made, the following table will be used to indicate that the review
                has been made by the appropriate engineering personnel.

Unit Abbreviations
AU -- Animal Units, equivalent
to 1,000 lb. live weight
Veg -- Vegetated
Mech -- Mechanical or structural
Land Appl -- Land Application
Grav -- Gravity
Sed -- Sediment
Agr -- Agriculture

Reviewed By	Title	Comments	Date

MISSOURI ENGINEERING JOB APPROVAL AUTHORITY

Code	Practice Name	Controlling Factors	Units	Job Class I	Job Class II	Job Class III	Job Class IV	Job Class V	Max. Approval Limit I & E	Design	Const.
	Any Practice	Hazard potential as defined in **NEM §503**	class	**Low**	**Low**	**Low**	**Low**	**Low**			
560	Access Road (Private) (Soil or Gravel Surface)	Culvert, inside diameter (includes stormwater conduits not associated with roads)	ft	1	2	4	5	6			
317	Composting Facility[2]	Capacity-dead animals (standard design)	cu ft	-	1,250	2,500	5,000	All[3]			
356	Dike	Water Height Hazard	ft class	- -	- -	3 III	6 III	12 III			
362	Diversion	Design Capacity	cfs	50	100	200	500	All			
554	Drainage Water Management	Subsurface Drainage System Inside Diameter Surface Drainage System Acres Drained	in ac	8 40	12 160	16 320	24 640	All All			
432	Dry Hydrant	Type Pump Lift Nominal Diameter	--- ft in	Impound-ment 6 6	Impound-ment 8 6	Impound-ment 10 8	In-stream 15 8	All All All			
393	Filter Strip	Distance to Stream, Surface Drain, or Pond Pollutant	ft 	1,000 -	500 -	200 Sed	All Sed	All Sed & Agr Waste			
410	Grade Stabilization Structure	Conduit type structure only, see Pond	----								
412	Grassed Waterway	Design Capacity	cfs	100	200	300	500	All			
464	Irrigation Land Leveling	Area Graded	ac	40	80	160	320	All			
468	Lined Waterway or Outlet	Design Capacity	cfs	-	50	100	200	All			
634	Manure Transfer[2]	Capacity Volume	gpm cu ft	- -	100 300,000	300 500,000	500 1,000,000	All All			
516	Pipeline	Length Diameter Pressure Delivery System	mi in psi type	0.25 1 - Grav Pump	0.5 2 - Grav Pump	1 2 60 Grav, Siphon Pump	2 3 80 Grav, Siphon, Pump	All All 300 Grav, Siphon, Pump			

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Code	Practice Name	Controlling Factors	Units	Job Class I	Job Class II	Job Class III	Job Class IV	Job Class V	Max. Approval Limit I & E	Max. Approval Limit Design	Max. Approval Limit Const.
378 402	Pond Dam	Embankment over active fault	----	None	None	None	None	None			
		Effective Height[1]	ft	15	20	25	30	35			
		Product - Storage x Effective Height	ac-sq ft	200	500	1,000	2,000	3,000			
		Principal Spillway -- Diameter	in	8	12	24	36	48			
		Drainage Area	ac	20	100	250	640	12,800			
350	Sediment Basin	Part of Animal Waste Management System									
		Effective Height of Dam	ft	8	10	15	30	35			
		Design Capacity – 1000 lb. Animal	AU	20	50	100	500	All			
574	Spring Development	Capacity	gpm	5	10	20	50	All			
587	Structure for Water Control	Pipe Appurtenance Only	Dia. In.	10	18	36	42	48			
606	Subsurface Drain	Inside Diameter	in	8	12	16	24	All			
607	Surface Drainage - Field Ditch	Area Drained	ac	40	160	320	640	All			
608	Surface Drainage - Main or Lateral	Design Capacity	cfs	40	100	200	400	1,000			
		Velocity	cfs	3	5	8	10	10			
		Area Drained	ac	160	320	640	640	640			
600	Terrace	Area Controlled in System (total system)	Ac	20	40	80	160	All			
614	Trough or Tank	Capacity	gal	200	500	1,000	2,000	All			
620	Underground Outlet	Diameter	in	8	12	18	30	All			
359	Waste Treatment Lagoon[2]	Anaerobic -- Total Volume[4]	cu ft	-	300,000	500,000	1,000,000	2,000,000			
638	Water and Sediment Control Basin	Fill Height	ft	4	5	8	12	All			
642	Water Well	Diameter	in	4	6	8	12	All			
		Estimated Depth	ft	-	100	200	300	All			
351	Well Decommissioning (according to Missouri Well Construction Rules)	Type	---	dug, bored, or cistern	dug, bored, or cistern	drilled	drilled	All			
		Diameter	in	$\geq$48	$\geq$24	$\geq$12	$\geq$6	All			
		Depth	ft	30	80	100	200	All			

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Code	Practice Name	Controlling Factors	Units	Job Class I	II	III	IV	V	Maximum Approval Limit I & E	Design	Const.
657 658 659	Wetland Restoration Wetland Creation Wetland Enhancement	Non-Levee Protected System[5] Height of Wetland Management Dike Drainage Area to Pool Area ratio[6,7] Total Wetland Complex Pool Area[8]	ft ac:ac ac	--- --- 10	--- --- 40	3 5 160	4 20 300	All All All			
		Levee Protected System[5] Height of Wetland Management Dike Drainage Area to Pool Area ratio[6,7] Total Wetland Complex Pool Area[8]	ft ac:ac ac	3 3 10	3 3 50	4 5 200	5 20 500	All All All			

[1] Effective Height - Difference in elevation between the auxiliary spillway crest (top of embankment if no auxiliary spillway) and the lowest point in the original cross section along the centerline of the embankment.

[2] Will involve review in a different office from designer and construction certification by a Missouri Professional Engineer. It may also include other practices - a part of a waste management plan.

[3] All - Up to maximum limit shown on State Conservation Engineer approved standard drawing.

[4] Other factors are same as for pond.

[5] Flood protection levees, not wetland management dikes, that will be maintained for flood protection after wetland restoration is complete.

[6] Excludes excavated pools without management berms.

[7] Drainage area includes the pool area plus all of the land area that drains to the pool.

[8] Total wetland pool complex is the sum of the surface areas at the highest water control structure crest elevation(s) of all pools associated with the site.